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*More recent data  
map (the 1955) in  
Weekly Weather & Crop Bulletin  
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# Mean Number of Thunderstorm Days in the United States

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## MEAN NUMBER OF DAYS WITH THUNDERSTORMS IN THE UNITED STATES

Definition.--In the recording of thunderstorm occurrences by Weather Bureau Observers, the instructions, beginning with the year 1894, have defined a day with thunderstorms as the local calendar day on which thunder is heard. Prior to 1894 these instructions called for the additional requirement that rain must accompany the thunder, thus reducing somewhat the frequency of the recorded occurrences during those earlier years. A day with thunderstorms is so recorded regardless of the number occurring on that day. Also, when a storm begins before midnight and ends after midnight, local time, a day with thunderstorms is recorded for both dates involved. These records, therefore, do not indicate the frequency of occurrence of individual storms. The duration of an individual thunderstorm is defined by Weather Bureau instructions as the time interval between the first and last thunder. The occurrence of lightning without thunder is not recorded as a thunderstorm in Weather Bureau climatological records.

Source of Data.--The data presented in the accompanying charts and tables were taken directly from the 1951 "Local Climatological Summary" issued for 266 Weather Bureau Offices in Continental United States, 16 in Alaska, 5 in certain islands of the Pacific and 2 in the West Indies. The charts cover only Continental United States but data for all these locations are shown in the table. The computed mean values shown are based on the official records at each location.

Reliability of Data.--These data are based on official Weather Bureau records at those locations where trained observing staffs are maintained. For the specific locations involved, therefore, they can be accepted as accurate. It should be understood, however, that the requirement that thunder be heard limits the area covered by each observing point to one having a radius of not more than 10 or 12 miles. Consequently a network of only 266 locations for the entire country may be inadequate for accurate interpolations for

areas between the points of observation. The considerable distances between stations, however, probably eliminate all or nearly all duplication of records, i. e., of the same thunderstorm being recorded by more than one observing station. These facts, together with the fact that there is considerable variation in the years-of-record on which the mean values are based at different stations, should be given due consideration in using the isoline charts.

Discussion of Data.--It will be noted from the charts and tables shown herein that the area having the greatest number of days with thunderstorms per year is central Florida, with relatively high values for the entire southeastern portion of the country and an area of secondary maxima centered roughly over northeastern New Mexico and south-central Colorado; also that the Pacific coastal regions have the least number of days with thunderstorms. As is to be expected, since the chief source of energy in the formation of thunderstorms is solar heating, there is a direct variation of the frequency of thunderstorm days with the seasons; the months of highest frequency being July and August and those of lowest frequency, December and January. In fact, thunderstorms rarely occur in most of the northern States during the winter season.

Thunderstorm days are relatively infrequent in most of Alaska but average 10 and 11 per year, respectively, in the Fairbanks and Northway areas. They are also rather infrequent in the Hawaiian Islands and the islands of Canton and Wake. Except for Honolulu, however, records for these locations are too short to indicate normal values. The two locations in the West Indies for which Weather Bureau records of these data are available, namely San Juan, Puerto Rico and St. Croix, Virgin Islands, indicate frequencies of 50 and 45 thunderstorm days per year, respectively. The latter figure, however, is based on only 4 years of record.



# THUNDERSTORMS

(Mean number of days)

State and Station	Years of record	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Spring	Summer	Autumn	Winter	Annual
															March-May	June-August	Sept.-Nov.	
<b>ALABAMA</b>																		
Anniston	45	1	2	4	5	7	11	12	10	5	1	1	1	16	33	7	4	60
Birmingham	48	1	2	4	5	7	12	14	12	6	2	1	1	16	38	9	4	67
119 - 62.31 - Mobile 1.73	71	1	2	3	4	6	10	14	13	6	2	1	1	13	37	9	5	64-2.12
114 - 51.26 - Montgomery 1.83	79	1	2	4	4	6	10	11	9	4	1	1	1	14	30	6	4	4.14-54-1.76
<b>ARIZONA</b>																		
Flagstaff	19	•	•	•	1	1	2	6	11	12	2	•	•	2	19	14	•	35
Payson	4	0	0	1	3	3	5	15	13	9	4	•	•	7	33	13	1	54
38 - 7.80 - Phoenix 4.3	56	•	1	1	1	1	1	7	8	7	1	1	•	3	16	6	1	26-64
Prescott	9	•	•	1	1	1	1	15	15	7	2	•	•	3	31	9	•	43
Tucson	11	•	•	1	•	•	1	11	12	6	3	1	•	1	24	10	•	35
Winslow	3	0	0	•	2	2	3	12	7	7	1	0	0	4	22	8	0	34
Yuma	28	•	•	•	•	•	•	3	4	2	1	•	•	•	7	3	•	10
<b>ARKANSAS</b>																		
Fort Smith	70	1	2	4	6	8	8	7	7	4	3	2	1	18	22	9	4	53
107 - 47.92 - Little Rock 1.60	59	2	2	5	7	7	9	9	8	4	2	1	2	19	26	7	6	57-58-1.57
Texarkana	9	2	4	7	7	11	9	10	7	6	3	3	2	25	26	12	8	71
<b>CALIFORNIA</b>																		
Bakersfield	18	•	•	1	1	•	•	0	•	1	•	•	•	2	•	1	•	3
Beaumont	13	•	•	•	1	•	•	2	2	1	1	•	•	2	4	2	1	9
120 - 43.92 - Blue Canyon	11	•	1	0	0	0	0	0	1	1	1	•	0	2	4	2	1	11
44 - 7.49 - Searsville 1.56	65	•	1	•	0	0	0	0	0	0	0	•	•	0	0	0	•	32.7-3-5
64 - Fresno 3.0	64	•	•	1	1	•	•	•	•	•	•	•	•	3	•	1	•	43
39 - 15.23 - Los Angeles 4.8	68	•	1	1	1	•	•	•	•	•	•	•	•	2	•	•	•	3-62
Mt. Shasta	9	0	•	•	2	3	3	3	2	1	0	•	0	5	8	1	•	14
Oakland	21	•	•	•	•	•	•	•	•	•	•	•	•	1	•	1	•	2
73 - 20.31 - Red Bluff 5.7	7	•	1	1	1	3	2	•	1	•	•	•	•	5	3	•	•	17.1-2-65
57 - 18.11 - Sacramento 4.0	20	0	0	1	1	1	0	1	1	1	1	0	0	2	2	2	•	18.7-4-43
46 - 10.04 - Sandberg	20	0	0	1	1	1	0	1	1	1	1	0	0	2	2	2	•	6
San Diego 3.6	80	1	•	•	•	•	•	1	1	•	•	•	•	•	2	•	•	1.66-3-53
San Francisco (City)	61	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1
San Francisco (Airport) 4.0	24	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	2.02-1-51
Santa Catalina	7	0	0	•	0	0	0	0	0	0	0	0	0	•	•	0	•	•
Santa Maria	9	•	•	•	0	0	0	0	0	0	0	0	0	•	•	0	•	•
<b>COLORADO</b>																		
Alamosa	7	0	•	0	2	7	6	14	14	6	2	•	0	9	34	8	•	51
Colorado Springs	4	0	0	1	3	10	12	18	15	7	2	0	0	14	45	9	0	1.47-68
Denver 3.4	68	•	•	2	6	9	2	10	4	4	1	•	•	8	31	5	•	144-1.67
Grand Junction 5.3	53	•	•	1	2	4	5	11	10	5	2	•	•	7	26	7	1	41-4.0
68 - Pueblo 3.2	63	•	•	2	2	6	8	12	10	3	1	•	•	8	30	4	•	1.47-42-1.83
<b>CONNECTICUT</b>																		
Hartford 1.3	47	•	•	1	2	4	5	7	5	2	1	•	•	7	17	3	•	28.0-27-1.06
131 - 42.28 - New Haven 4.32	79	•	•	1	1	3	5	6	5	2	1	•	•	5	16	3	•	2.08-24-1.17
<b>DELAWARE</b>																		
Wilmington	4	0	0	1	2	6	7	6	7	2	1	1	0	9	20	4	0	33
<b>DIST. OF COLUMBIA</b>																		
Washington	63	•	1	1	2	5	7	9	6	3	1	•	•	8	22	4	1	35
<b>FLORIDA</b>																		
Apalachicola	29	1	2	4	4	5	11	17	16	10	2	1	1	13	44	13	4	74
Daytona Beach	7	2	1	1	6	8	15	20	18	9	2	2	2	18	55	15	5	93
Fort Myers	7	1	1	1	4	8	15	24	20	12	3	1	1	13	59	16	3	91
121 - 51.27 - Jacksonville 1.93	61	1	2	3	4	7	13	18	16	8	2	1	1	14	47	11	4	43.0-76-1.96
Key West	68	1	1	2	2	4	8	11	12	10	4	1	1	8	31	15	3	57
Melbourne	7	1	1	4	6	10	13	19	18	10	3	2	1	20	50	15	3	88
Miami 2.40	41	1	1	3	5	8	11	14	13	9	4	1	1	15	38	14	3	69.7-70-2.35
Orlando	7	1	1	3	6	8	16	23	18	11	3	1	1	17	57	15	2	91
112 - 59.24 - Pensacola 2.46	58	2	2	4	4	6	11	15	14	7	2	1	2	14	40	10	4	57.3-70-2.22
Tallahassee	12	1	2	5	4	7	14	18	15	7	2	2	1	16	47	11	7	78
Tampa 1.20	61	1	1	3	3	7	15	20	19	11	3	1	1	13	54	15	3	40.0-85-2.18
West Palm Beach	9	1	•	2	4	9	12	17	17	10	5	1	1	15	46	16	2	79
<b>GEORGIA</b>																		
Albany	32	1	2	4	6	7	9	17	11	5	2	1	1	17	37	8	4	66
Athens	8	1	1	3	3	6	10	11	8	4	1	1	0	12	29	6	2	49
Atlanta	73	1	1	3	4	6	9	11	9	3	1	1	1	13	29	5	3	50
Augusta	73	1	1	2	3	5	7	10	8	3	1	1	1	10	25	5	1	41
Columbus	6	1	2	4	4	8	16	10	4	1	2	1	1	35	7	4	1	64
113 - 44.41 - Macon 1.46	59	1	2	3	5	6	11	13	11	4	1	1	1	14	35	6	4	43.8-59-1.64
Rome	6	3	2	4	4	9	10	12	11	5	2	2	1	17	33	9	6	65
114 - 49.24 - Savannah 1.36	76	1	1	2	3	6	10	13	11	5	1	•	•	11	34	6	2	42.0-53-2.00
Valdosta	4	0	2	1	4	8	14	18	12	5	2	2	1	13	44	9	3	69
<b>IDAHO</b>																		
Boise 4.0	12	0	•	0	1	4	4	3	2	2	1	•	0	6	9	3	•	9.7-18-1.33
103 - 3.20 - Lewiston 4.0	5	0	0	1	1	3	4	4	3	1	1	•	0	4	11	2	•	17-1-33
96 - 11.55 - Pocatello 5.1	13	•	•	•	1	4	4	6	7	4	1	•	•	5	17	5	•	1.07-27-1.46
<b>ILLINOIS</b>																		
Cairo 1.52	68	1	2	4	6	8	10	9	8	5	2	2	1	18	27	9	4	43.2-58-1.39
Chicago 1.20	72	•	•	2	3	5	7	7	6	4	2	1	•	10	20	7	•	2.42-37-1.36
124 - 33.00 - Joliet	10	1	1	2	3	6	8	6	7	4	1	1	1	11	21	6	3	41
Moline	17	•	1	3	4	7	9	8	7	4	2	2	1	14	24	8	1	47
113 - 35.07 - Peoria 1.37	47	•	1	3	4	7	9	8	7	5	2	1	•	14	24	8	1	47
Springfield	73	•	1	3	5	8	9	8	7	5	2	1	•	16	24	8	1	49
<b>INDIANA</b>																		
Evansville 1.39	55	1	1	4	5	7	9	8	7	4	2	1	1	16	24	7	3	32.7-50-1.36
129 - 34.37 - Fort Wayne 1.27	40	0	1	2	3	6	8	6	4	2	1	0	•	11	22	7	•	12.35-41-1.11
131 - 40.00 - Indianapolis 1.26	77	0	1	3	4	6	8	7	6	4	2	1	0	15	21	7	•	12.55-48-1.30
South Bend	12	•	•	3	4	7	9	7	5	2	1	•	•	14	23	8	•	48
121 - 39.83 - Terre Haute 1.38	39	1	1	3	4	7	9	8	7	5	2	2	•	14	24	9	•	23.07-49-1.40
<b>IOWA</b>																		
Burlington	10	•	1	3	5	7	12	10	7	5	3	2	1	15	29	10	2	56
Davenport 1.26	72	•	•	2	3	7	8	8	6	5	2	•	•	12	22</			



# THUNDERSTORMS

(Mean number of days)

State and Station	Years of record	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Spring	Summer	Autumn	Winter	Annual	
															March-May	June-August	Sept.-Nov.		Dec.-Feb.
149 - 39.24 134 - 42.09	MAINE Caribou Eastport 97 Portland 1.24	12	0	0	1	2	5	7	4	1	1	0	0	3	16	2	0	21	
		66	0	0	1	1	3	3	4	3	1	1	0	3	10	2	0	13	
		21	0	0	1	1	3	6	7	5	3	1	0	0	5	18	4	0	2.15-13-.76
124 - 42.86	MARYLAND Baltimore 1.38 Frederick	68	0	0	1	2	5	8	6	3	1	0	0	8	20	4	0	27	
		10	0	0	1	1	5	6	5	4	2	1	0	0	7	14	3	0	2.77-27-.87
125 - 40.39 133 - 40.13	MASSACHUSETTS Boston 1.18 Nantucket 1.13 Pittsfield	59	0	0	1	1	3	4	4	2	0	0	0	5	13	2	0	20	
		55	0	0	1	1	2	4	3	3	1	1	0	0	4	9	2	0	2.70-20-.96
		13	0	0	1	1	4	6	8	3	3	1	0	0	6	19	4	0	2.67-15-1.03
135 - 31.70 136 - 33.97	MICHIGAN Alpena Detroit 1.11 Escanaba Grand Rapids 1.14 Lansing Marquette Muskegon Sault Ste. Marie	78	0	0	1	3	5	6	4	3	1	0	0	5	15	4	0	24	
		81	0	1	1	3	5	6	6	5	2	1	0	0	9	17	5	0	12.10-32-1.12
		53	0	0	1	1	4	6	8	6	3	1	0	0	6	20	7	0	33
		48	0	1	2	3	5	7	7	6	5	2	1	0	10	20	8	0	12.14-39-1.04
		42	0	1	2	3	5	7	7	7	5	2	1	0	10	21	8	0	40
		71	0	0	1	1	3	5	6	5	3	1	0	0	5	16	4	0	25
		10	0	0	1	3	5	6	6	6	4	2	1	0	9	17	7	0	33
63	0	0	1	1	3	4	5	4	4	2	0	0	5	13	6	0	24		
128 - 28.23 108 - 26.86	MINNESOTA Duluth 1.06 International Falls Minneapolis 1.18 Rochester St. Cloud St. Paul	59	0	0	0	1	4	6	7	6	4	1	0	5	19	5	0	29	
		12	0	0	1	2	6	6	7	7	3	1	0	0	3	21	4	0	2.11-29-1.05
		59	0	0	1	2	6	8	8	7	5	2	0	0	9	22	8	0	2.43-39-1.24
		10	0	0	1	3	7	8	8	7	4	2	0	0	11	23	6	0	40
		12	0	0	1	2	5	7	8	7	4	2	0	0	8	22	6	0	36
63	0	0	1	2	5	7	7	6	4	2	0	0	8	20	6	0	34		
108 - 51.51	MISSISSIPPI Jackson Meridian Vicksburg 1.30	13	3	3	5	6	7	10	12	8	4	2	2	18	30	8	8	64	
		60	2	3	4	5	7	10	13	10	5	1	2	2	16	33	8	7	64
		67	2	3	5	6	6	9	11	9	5	2	2	2	17	29	9	7	70-62-1.73
111 - 38.99 101 - 34.61 112 - 39.17	MISSOURI Columbia 1.36 Kansas City St. Joseph 1.39 St. Louis 1.45 Springfield	62	1	1	3	5	9	11	8	9	6	3	2	17	28	11	2	58	
		63	0	1	3	5	8	10	8	8	9	6	3	1	16	27	10	2	55
		42	0	1	2	5	8	10	10	9	7	3	1	0	15	27	9	2	54
		59	1	1	3	6	9	11	9	7	5	3	2	1	15	23	9	3	49
		64	1	1	4	6	9	10	9	8	5	3	1	1	19	27	10	3	59
89 - 12.92 99 - 12.58 119 - 14.93 123 - 13.90	MONTANA Billings Butte Glasgow Great Falls Havre 1.59 Helena 1.55 Kalispell 1.54 Missoula 1.60 37	12	0	0	0	1	5	8	10	7	2	0	0	6	25	2	0	33	
		13	0	0	0	1	6	9	13	10	4	0	0	7	32	4	0	43	
		8	0	0	0	1	3	7	6	8	2	0	0	0	4	21	2	0	27
		14	0	0	0	1	4	7	9	6	2	0	0	0	5	22	2	0	29
		70	0	0	0	1	3	6	6	5	2	0	0	0	4	17	2	0	23
		72	0	0	0	1	5	7	9	7	2	0	0	0	6	23	2	0	31
		50	0	0	0	1	3	5	5	6	2	0	0	0	3	17	2	0	22
16	0	0	0	1	4	6	8	6	3	0	0	0	5	19	3	0	27		
74 - 27.58 83 - 18.44	NEBRASKA Grand Island Lincoln 1.74 Norfolk North Platte 1.00 Omaha Scottsbluff Valentine	13	0	0	2	3	8	11	8	8	5	3	1	13	29	8	2	50	
		55	0	0	1	4	7	10	8	8	5	3	1	0	26	9	0	47	
		6	0	0	2	5	9	10	8	9	5	4	1	0	16	27	10	0	53
		77	0	0	2	6	9	9	8	9	3	1	0	0	8	26	4	0	38
		81	0	0	1	3	6	8	7	7	5	2	0	0	10	22	7	0	39
		8	0	0	1	2	7	12	11	9	4	2	0	0	10	32	6	0	48
60	0	0	0	2	5	9	10	8	4	1	0	0	7	27	5	0	39		
49 - 7.14 72 - 8.56	NEVADA Ely Las Vegas Reno 3.31 Winnemucca 1.28	13	0	0	0	2	5	4	8	7	3	2	0	7	19	5	0	31	
		45	0	0	0	1	4	7	4	3	2	0	0	2	10	2	0	13	
		73	0	0	0	1	2	2	2	3	2	1	0	0	3	7	1	0	14
120 - 38.22	NEW HAMPSHIRE Concord 1.17 Mt. Washington	49	0	0	1	1	3	5	6	5	2	1	0	5	16	3	0	24	
		19	0	0	1	1	2	4	5	3	1	0	0	3	12	1	0	16	
61 - 8.49 53 - 13.06	NEW JERSEY Atlantic City Newark Trenton	78	0	0	1	3	5	5	4	2	1	0	0	6	14	3	0	23	
		21	0	0	1	1	4	6	7	5	2	1	0	6	18	3	0	27	
		39	0	0	1	2	5	7	9	7	3	1	0	8	23	4	0	35	
137 - 36.79 126 - 42.94	NEW MEXICO Albuquerque 1.60 Clayton Raton Roswell 1.92	21	0	0	1	2	4	6	13	13	5	3	0	7	32	8	0	47	
		10	0	0	1	4	11	13	10	13	5	3	0	12	42	7	0	63	
		5	0	0	1	4	11	10	11	18	7	3	0	16	49	10	0	75	
		47	0	0	1	3	6	8	10	9	5	3	0	10	27	8	0	45	
131 - 38.11 121 - 45.88 124 - 54.72 121 - 48.18	NEW YORK Albany 1.11 Bear Mountain Binghamton Buffalo New York 1.38 Oswego Rochester Syracuse	78	0	0	0	1	3	5	6	5	2	1	0	4	16	3	0	23	
		11	0	0	0	1	4	6	9	8	3	0	0	5	20	3	0	28	
		55	0	0	1	1	5	6	8	6	3	1	0	0	7	20	3	0	31
		61	0	0	1	2	4	5	7	5	3	1	0	0	17	5	0	29	
		68	0	0	1	2	4	6	7	6	3	1	1	0	7	19	5	0	31
		68	0	0	1	1	3	5	6	5	3	1	0	0	5	16	4	0	25
		37	0	0	1	2	3	5	7	5	3	1	0	0	6	17	4	0	27
		49	0	0	1	2	4	6	7	6	3	1	0	0	7	19	4	0	30
121 - 38.11 121 - 45.88 124 - 54.72 121 - 48.18	NORTH CAROLINA Asheville 1.29 Charlotte 1.40 Greensboro Hatteras 1.92 Raleigh Wilmington 1.69 Winston-Salem	49	0	1	2	3	7	11	13	10	5	1	0	12	34	6	0	53	
		73	0	1	2	3	6	9	12	9	3	1	1	0	11	29	5	0	46
		23	0	1	2	3	5	10	12	9	4	1	1	0	10	31	6	0	50
		54	1	1	2	3	5	6	8	10	7	4	1	1	10	21	6	0	41
		65	0	1	2	3	6	8	10	7	3	1	0	0	11	25	4	0	40
		81	1	1	2	3	5	8	11	9	4	1	1	0	10	28	6	0	46
94 - 16.31 102 - 17.13 90 - 14.44	NORTH DAKOTA Bismarck 1.86 Devils Lake 1.91 Fargo Williston 1.72	61	0	0	0	1	4	7	8	7	3	1	0	5	22	4	0	31	
		47	0	0	0	1	3	7	8	7	3	1	0	4	22	4	0	30	
		68	0	0	0	1	4	7	7	6	3	1	0	5	20	4	0	29	
		70	0	0	0	1	3	7	7	5	2	0	0	4	19	2	0	25	
154 - 33.82 132 - 39.48 120 - 35.87 132 - 37.21	OHIO Akron Cleveland 1.10 Cincinnati 1.28 Columbus 1.14 Dayton Sandusky Toledo Youngstown	21	0	0	2	3	6	7	8	6	4	1	1	11	21	6	0	38	
		64	0	0	2	2	5	7	7	5	4	2	1	0	9	19	7	0	35
		36	1	1	4	4	7	9	10	8	5	2	1	1	15	27	8	0	53
		73	0	1	3	3	6	8	8	6									



# THUNDERSTORMS

(Mean number of days)

State and Station	Years of record	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Spring March-May	Summer June-August	Autumn Sept.-Nov.	Winter Dec.-Feb.	Annual	
<b>OREGON</b>																			
103-11.22	Baker 52	60	0	0	1	2	4	4	3	2	0	0	0	3	11	2	0	88-16-33	
	Burns	13	0	0	1	2	3	3	3	1	0	0	0	3	9	1	0	14	
	Eugene	9	0	0	0	2	1	0	1	1	0	0	0	2	2	1	0	5	
	Meacham	7	0	0	1	5	4	4	5	2	0	0	0	6	13	2	0	21	
	Medford	24	0	0	1	2	2	2	2	1	0	0	0	3	5	1	0	9	
	Pendleton	15	0	0	1	2	2	2	2	2	1	0	0	3	6	3	0	12	
152-42.04	Portland 62	11	0	0	0	2	1	1	1	1	0	0	0	2	3	1	0	270-6-41	
133-32.24	Roseburg 46	70	0	0	0	2	1	1	1	1	0	0	0	1	3	1	0	207-5-41	
	Salem	18	0	0	0	1	1	1	1	1	0	0	0	1	3	1	0	5	
	Sexton Summit	7	0	0	0	2	2	1	1	1	0	0	0	3	4	1	0	8	
	Troutdale	6	0	0	1	1	3	1	1	1	2	1	0	3	5	4	0	12	
<b>PENNSYLVANIA</b>																			
	Allentown	8	0	1	2	6	6	9	7	4	1	0	0	9	22	5	0	36	
159-37.27	Curwensville	9	0	1	2	4	7	12	7	4	1	0	0	13	28	5	1	47	
	Erie 1.20	70	0	0	1	2	5	6	7	5	4	2	1	8	18	7	0	235-33-115	
	Harrisburg	63	0	0	1	2	5	7	6	4	1	0	0	8	21	4	0	33	
	Park Place	9	0	0	1	2	5	6	7	6	2	1	0	8	19	3	0	30	
	Philadelphia	81	0	0	1	2	5	7	6	5	2	1	0	5	7	17	0	27	
151-36.22	Pittsburgh 1.12	66	0	0	2	3	6	8	9	7	4	1	0	11	24	5	0	203-40-1.05	
	Reading	39	0	0	1	2	5	7	9	6	3	0	0	8	22	3	0	33	
	Scranton	51	0	0	1	2	4	7	8	6	3	1	0	7	21	4	0	32	
	Williamsport	56	0	0	1	1	3	4	5	3	2	1	0	5	12	3	0	20	
<b>RHODE ISLAND</b>																			
122-40.27	Block Island 1.14	71	0	0	1	2	3	4	3	2	1	0	0	4	10	3	0	257-17-1.01	
122-39.02	Providence 1.17	47	0	0	1	1	3	4	5	4	2	1	0	5	13	3	0	243-21-1.00	
<b>SOUTH CAROLINA</b>																			
113-42.07	Charleston	61	1	1	2	3	6	10	13	13	5	1	0	11	36	7	2	56	
	Columbia 1.38	65	0	0	1	2	4	6	9	11	9	4	1	12	29	5	0	1298-47-1.54	
	Florence	6	0	0	0	3	5	7	10	13	10	5	0	15	33	8	0	56	
119-48.56	Greenville 1.60	34	1	1	3	3	7	10	13	9	4	1	1	13	32	6	0	1364-52-1.50	
	Spartanburg	21	1	1	2	3	6	9	12	9	4	1	0	11	30	6	2	49	
<b>SOUTH DAKOTA</b>																			
93-19.42	Huron 1.02	70	0	0	0	2	5	9	9	8	4	1	0	7	26	5	0	199-38-1.07	
93-18.04	Rapid City 1.02	52	0	0	0	1	1	11	11	9	3	0	0	7	31	3	0	200-41-1.84	
	Sioux Falls	6	0	0	1	3	7	9	8	6	3	0	0	11	26	9	0	46	
<b>TENNESSEE</b>																			
133-52.19	Bristol 1.56	8	1	1	2	3	8	11	11	8	6	1	0	13	30	8	2	53	
133-48.00	Chattanooga 1.37	73	1	1	2	4	5	7	11	12	10	4	1	16	33	6	0	240-58-1.38	
112-48.05	Knoxville 1.26	71	0	1	3	4	7	9	10	8	4	1	0	14	27	4	0	138-48-1.27	
	Memphis 1.26	70	2	2	4	5	6	8	8	7	4	2	1	15	23	8	0	557-51	
121-46.55	Nashville 1.44	79	1	2	4	5	7	9	10	7	4	1	1	16	26	6	0	427-52-1.37	
<b>TEXAS</b>																			
68-24.22	Abilene 1.30	66	0	1	2	5	8	6	5	5	3	2	1	15	16	6	0	1296-38-1.40	
73-21.02	Amarillo 1.23	60	0	0	1	3	7	5	8	4	2	0	0	10	22	6	0	281-38-1.41	
77-34.88	Austin 1.54	25	1	2	4	5	7	5	5	4	4	2	2	16	14	8	0	4347-42-1.84	
77-32.90	Brownsville 1.90	29	0	1	1	2	4	3	4	4	5	2	1	7	11	8	0	244-5-28-1.84	
81-32.35	Corpus Christi 1.55	65	1	1	2	3	5	4	4	4	5	2	1	10	12	8	0	327-2-33-1.79	
81-34.97	Dallas 1.58	38	2	3	4	6	8	7	5	5	4	3	2	18	17	9	0	727-51-1.81	
83-34.90	Del Rio 1.26	46	0	1	3	4	5	4	3	3	2	2	1	11	10	5	0	1348-28-1.58	
84-37.80	El Paso 1.40	73	0	0	1	4	6	4	4	3	3	0	0	20	20	5	0	471-5-46-1.69	
77-49-31.88	Fort Worth 1.50	53	0	2	3	4	6	6	6	5	4	3	1	17	17	8	0	625-46-1.58	
77-49-45.74	Galveston 2.18	60	2	2	3	4	5	5	8	8	6	2	2	12	21	10	0	625-46-1.58	
101-45.74	Houston 1.98	42	2	2	3	4	6	7	10	10	6	3	2	13	27	11	0	625-46-1.58	
	Laredo	9	1	2	2	4	8	5	4	3	4	1	1	14	12	6	0	36	
94-40.33	Lubbock	5	0	1	1	3	11	12	10	8	5	0	0	15	30	6	0	51-52	
108-53.22	Marshall 1.68	70	1	2	4	5	6	6	6	4	2	2	2	15	18	8	0	538-2-46-1.75	
	Port Arthur 2.20	35	3	3	4	5	6	9	14	13	7	3	2	3	15	36	12	947-5-72-2.22	
	San Angelo	4	0	3	1	5	8	7	7	6	4	3	1	0	14	20	8	3	
	San Antonio	67	1	1	2	5	6	4	5	4	4	2	2	1	13	13	8	3	
	Victoria	5	1	2	2	6	7	5	8	7	7	1	1	2	15	20	9	5	
	Waco	21	1	2	3	4	6	4	4	4	3	2	1	13	12	6	4	35	
	Wichita Falls	8	1	3	3	5	10	9	7	5	4	3	1	18	21	8	5	52	
<b>UTAH</b>																			
90-16.09	Milford	3	0	0	0	3	3	3	9	7	3	0	0	6	19	3	0	172-28-45	
	Salt Lake City 30	24	0	1	1	3	4	5	7	8	4	2	0	8	20	6	1	172-28-45	
<b>VERMONT</b>																			
	Burlington	46	0	0	0	1	3	6	8	6	3	1	0	4	20	4	0	28	
<b>VIRGINIA</b>																			
	Cape Henry	60	0	1	2	3	5	7	9	7	3	1	0	10	23	5	1	39	
	Lynchburg	68	0	1	2	3	5	8	9	7	3	0	0	8	24	3	0	35	
	Norfolk	67	0	1	2	3	5	7	9	7	3	0	0	10	23	4	1	38	
	Richmond	54	0	0	2	3	6	8	10	7	3	1	0	11	25	4	0	40	
	Roanoke	5	0	0	1	3	8	9	9	8	4	0	0	12	26	4	0	42	
<b>WASHINGTON</b>																			
194-57.88	Ellensburg	7	0	0	0	3	2	2	3	1	0	0	0	3	7	1	0	11	
	North Head 52	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
141-23.22	Olympia	10	0	0	0	1	1	1	1	1	0	0	0	1	2	0	0	270-3-46	
151-37.44	Port Angeles 39	5	0	0	0	1	1	1	1	1	0	0	0	1	3	0	0	166-4-30	
	Seattle 42	58	0	0	0	1	1	1	1	1	0	0	0	1	3	0	0	388-5-35	
113-16.07	Spokane 36	71	0	0	0	1	1	1	1	1	0	0	0	1	3	1	0	122-11-31	
	Stamper Pass	8	0	0	1	2	3	2	2	1	0	0	0	2	7	1	0	8	
150-38.65	Stevenson	5	0	0	0	2	2	1	2	1	0	0	0	3	5	1	0	10	
198-30.86	Tacoma 50	55	0	0	1	1	1	1	1	2	1	1	1	3	3	4	0	247-10-38	
	Tatoosh Island 30	66	0	0	0	1	1	1	1	1	0	0	0	2	3	2	0	271-9-30	
108-16.10	Walla Walla 32	66	0	0	0	1	2	2	2	2	1	0	0	2	6	2	0	271-9-30	
	Yakima 22	43	0	0	0	1	1	1	1	1	0	0	0	1	3	1			



# THUNDERSTORMS

(Mean number of days)

State and Station	Years of record	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Spring March- May	Summer June- August	Autumn Sept.- Nov.	Winter Dec.- Feb.	Annual
<b>ALASKA</b>																		
Annette ✓	4	*	0	0	0	0	1	0	0	0	0	0	0	0	1	0	*	1
Anchorage ✓	9	0	0	0	0	0	1	*	*	0	0	0	0	0	1	0	0	1
Barrow ✓	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bethel ✓	8	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0	0	2
Cordova ✓	6	0	0	0	0	1	*	4	1	0	0	0	0	0	4	0	0	4
Fairbanks ✓	22	0	0	0	0	0	4	2	0	0	0	0	0	0	9	0	0	10
Galeana ✓	4	0	0	0	0	*	2	2	0	0	0	0	0	0	4	0	0	4
Gambell ✓	8	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1
Juneau ✓	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kotzebue ✓	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
McGrath ✓	9	0	0	0	0	0	3	3	0	*	0	0	0	0	6	*	0	6
Nome ✓	45	0	0	0	0	0	*	*	*	*	*	*	*	0	*	*	*	*
Northway ✓	9	0	0	0	0	1	3	6	1	0	0	0	0	1	10	0	0	11
St. Paul Island ✓	17	0	0	0	0	0	*	6	0	0	0	0	0	0	*	0	0	*
Umiat ✓	4	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1
Yakutat ✓	3	0	0	0	0	0	0	0	0	0	*	0	0	0	0	*	0	1
<b>PACIFIC AREA</b>																		
Canton Island	5	0	0	0	1	1	1	*	*	0	0	0	0	2	1	0	0	3
Hilo, T. H.	6	*	1	1	1	*	0	*	0	0	1	1	*	2	*	2	2	6
Honolulu, T. H.	47	1	1	1	1	*	*	*	*	1	1	1	1	1	*	2	3	6
Lihue	2	0	1	2	1	1	0	0	0	2	1	0	1	4	0	3	2	9
Wake Island	2	0	0	0	0	0	0	2	1	1	2	2	1	0	3	5	1	9
<b>PUERTO RICO</b>																		
San Juan	53	*	*	*	2	5	6	7	7	10	8	3	1	7	20	21	2	50
St. Croix, Virgin Is.	4	0	1	1	1	4	6	4	5	9	8	4	2	6	15	21	3	45

Note: Years of record through 1951.  
\* Less than one-half day.



# THUNDERSTORMS

JANUARY

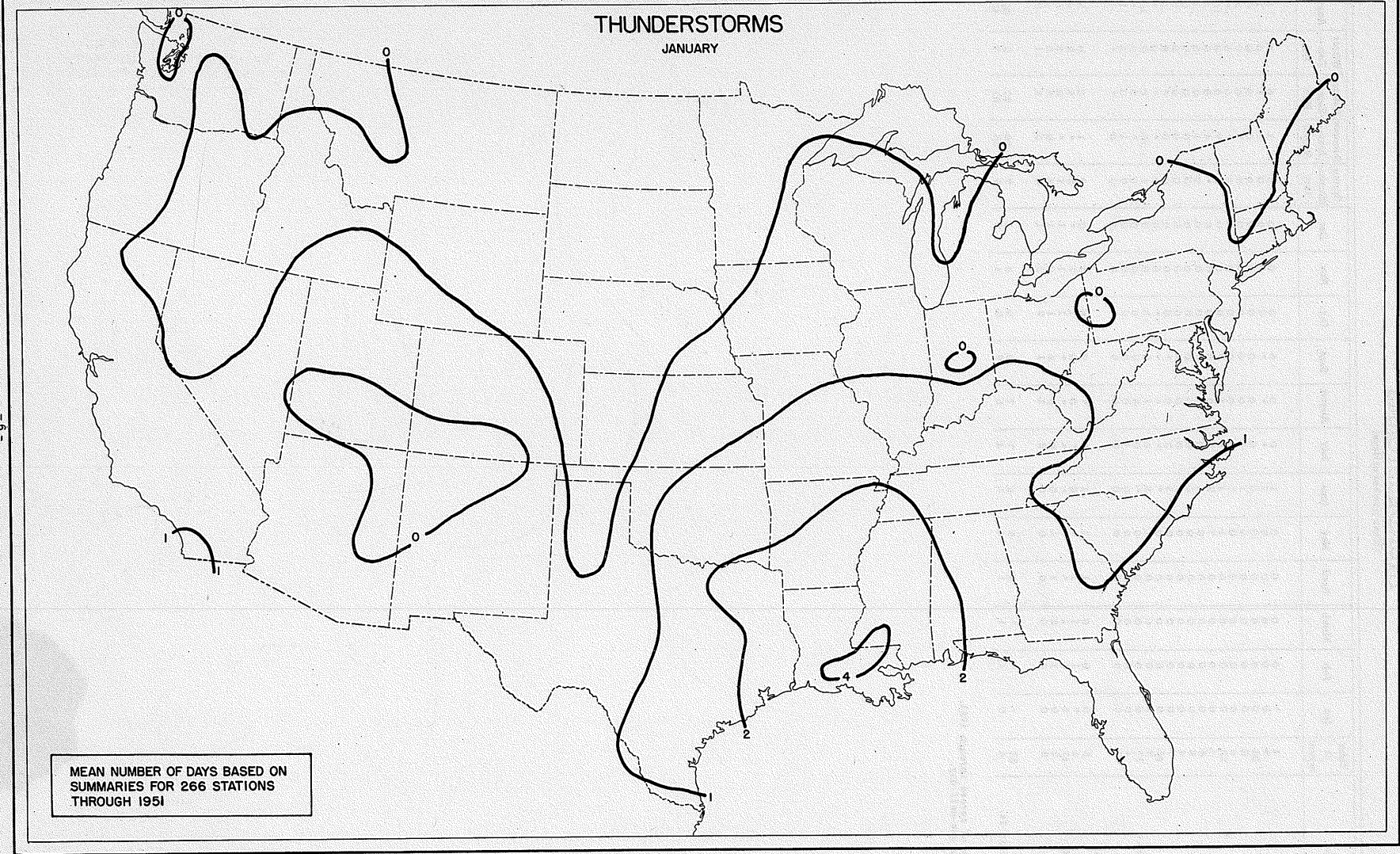


FIGURE 1



# THUNDERSTORMS

FEBRUARY

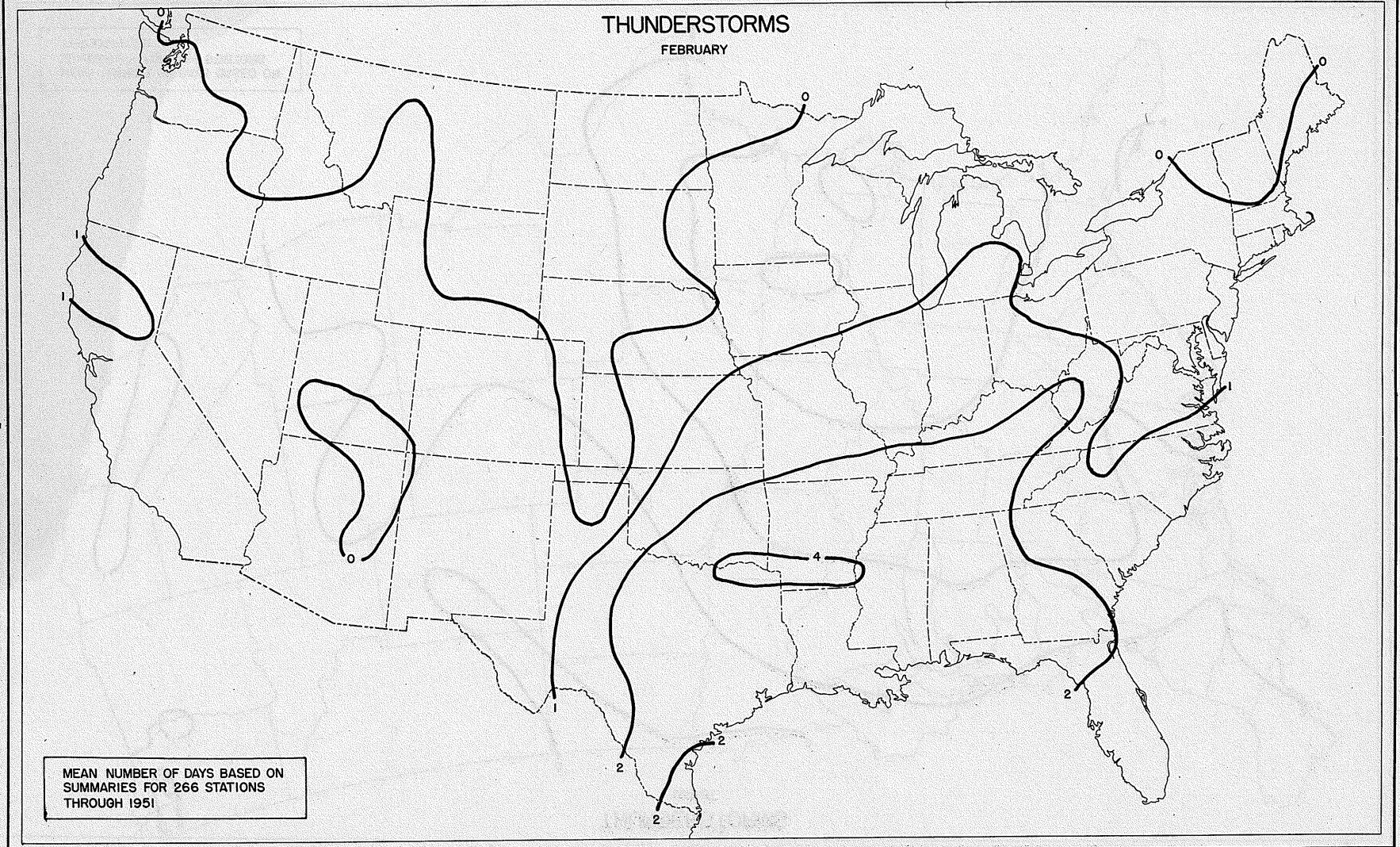
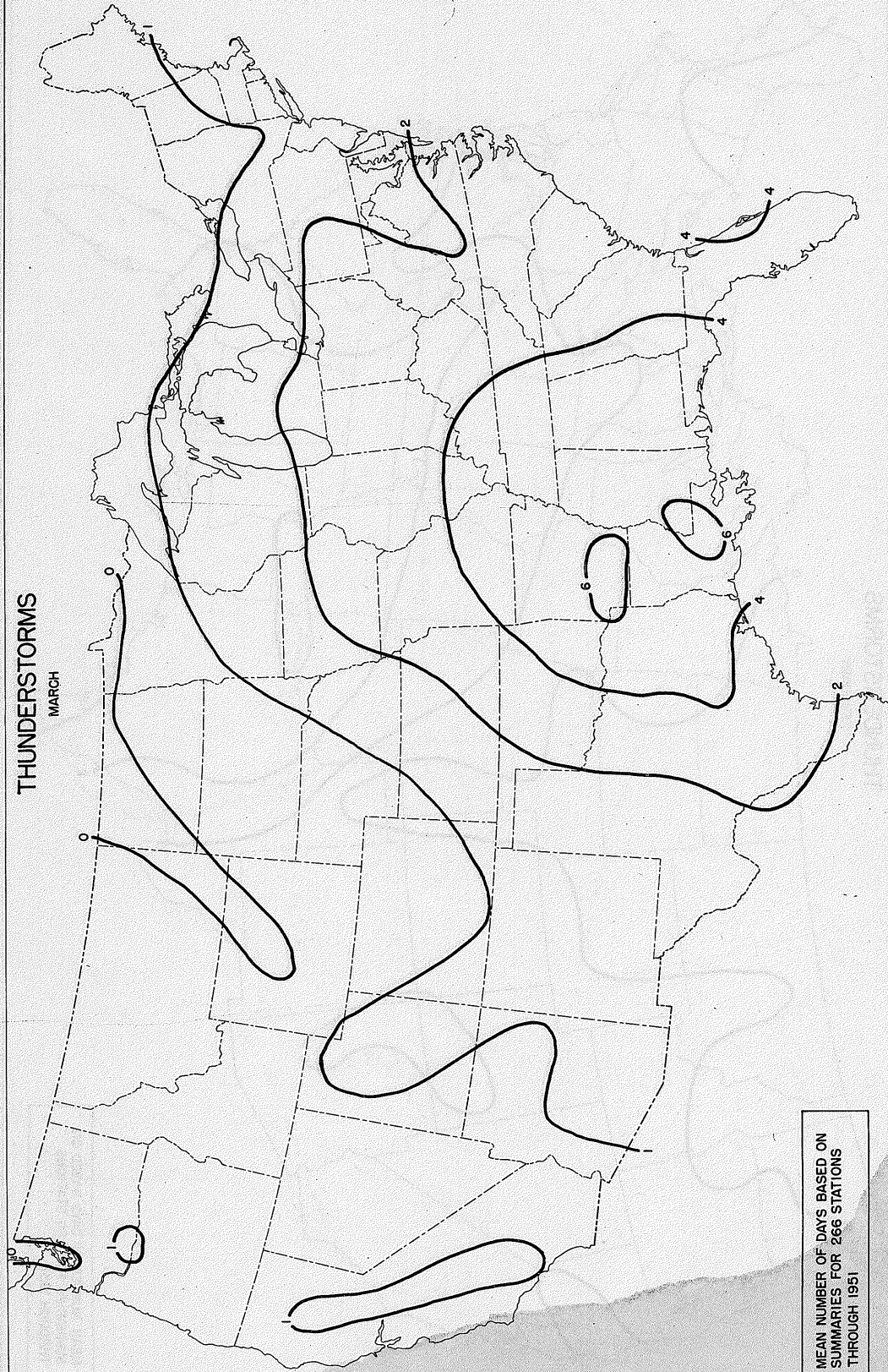


FIGURE 2



# THUNDERSTORMS

MARCH



MEAN NUMBER OF DAYS BASED ON SUMMARIES FOR 266 STATIONS THROUGH 1951

FIGURE 3

# THUNDERSTORMS

APRIL

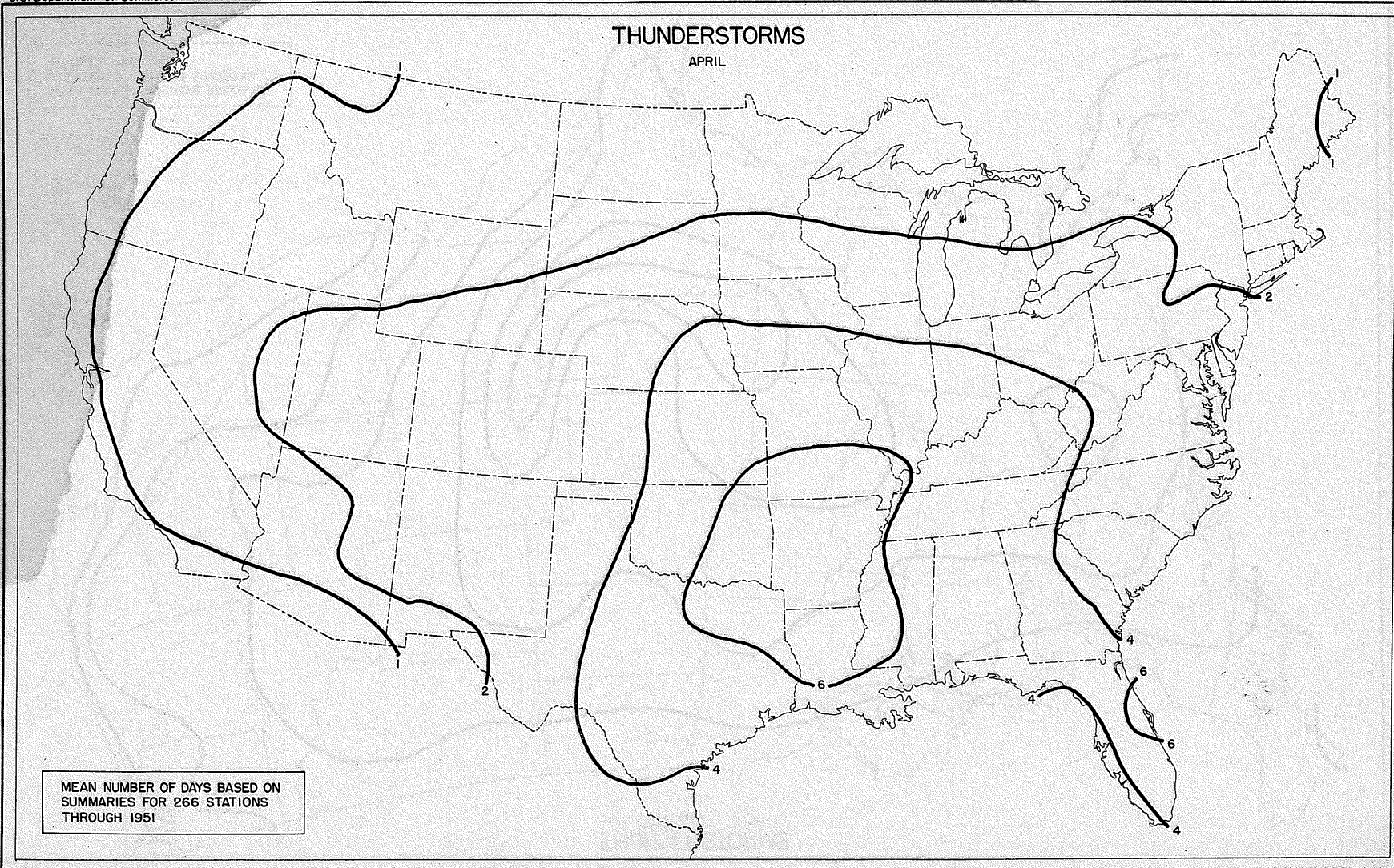
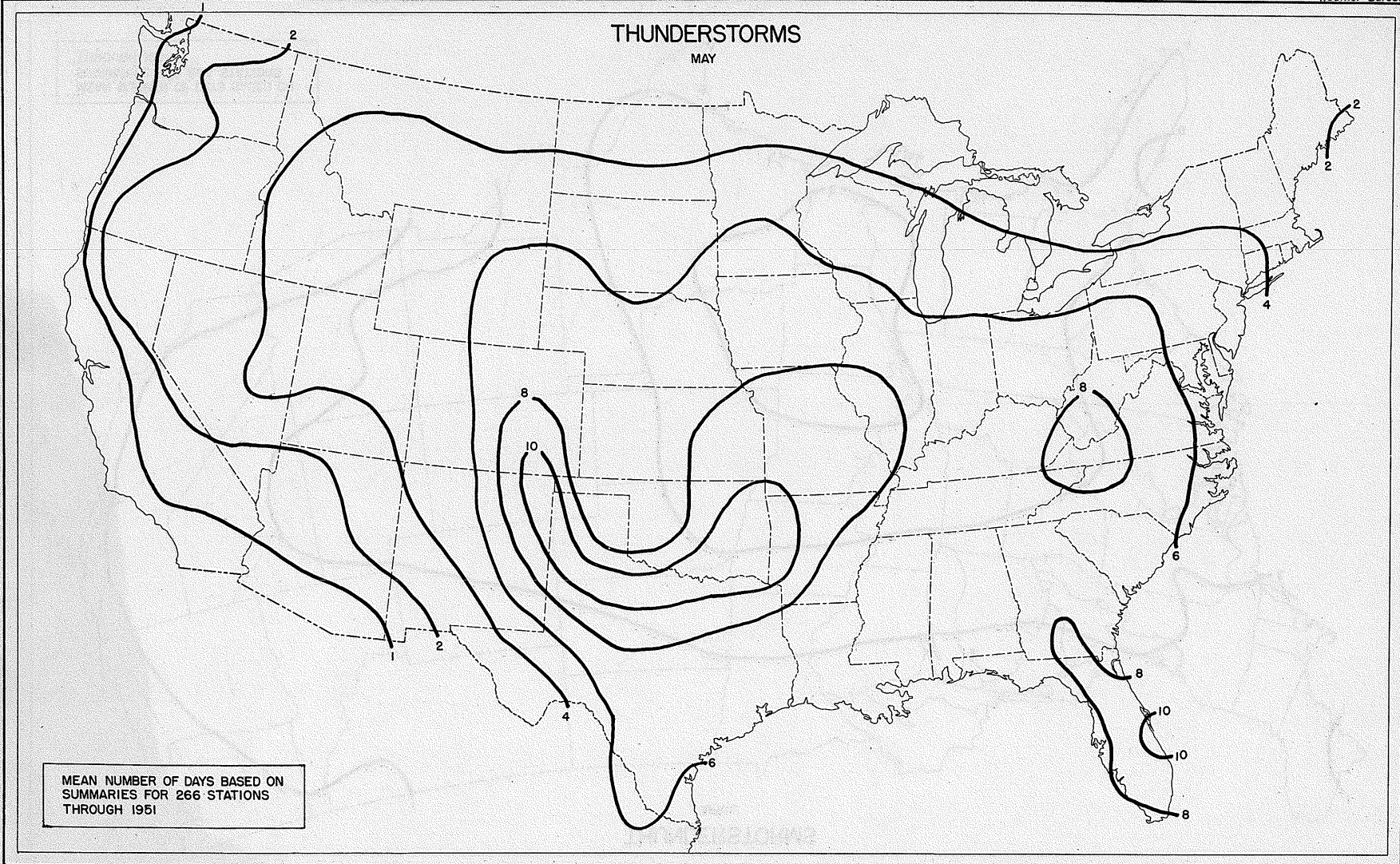


FIGURE 4



# THUNDERSTORMS

MAY



MEAN NUMBER OF DAYS BASED ON  
SUMMARIES FOR 266 STATIONS  
THROUGH 1951

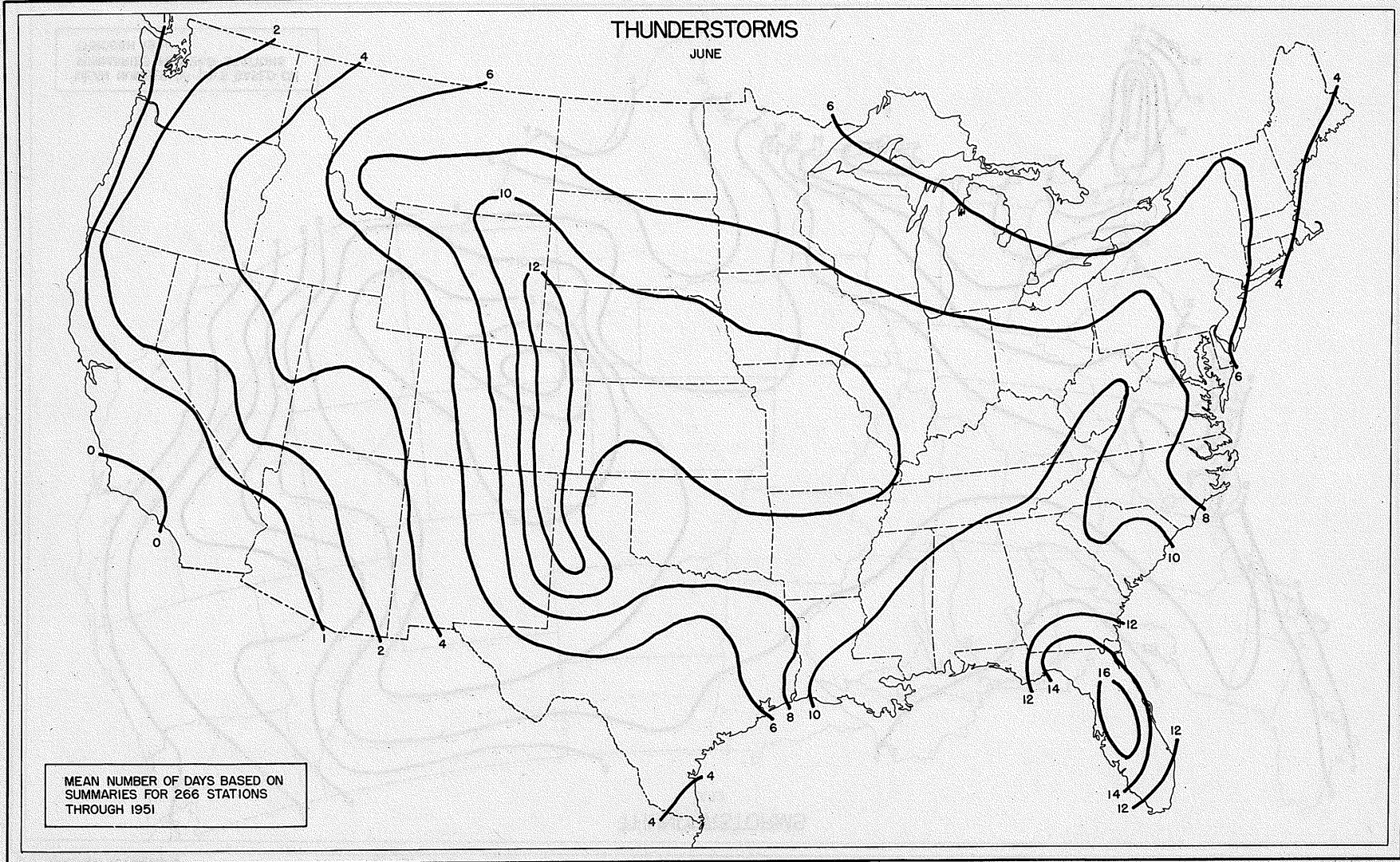
FIGURE 5

- 01 -



# THUNDERSTORMS

JUNE



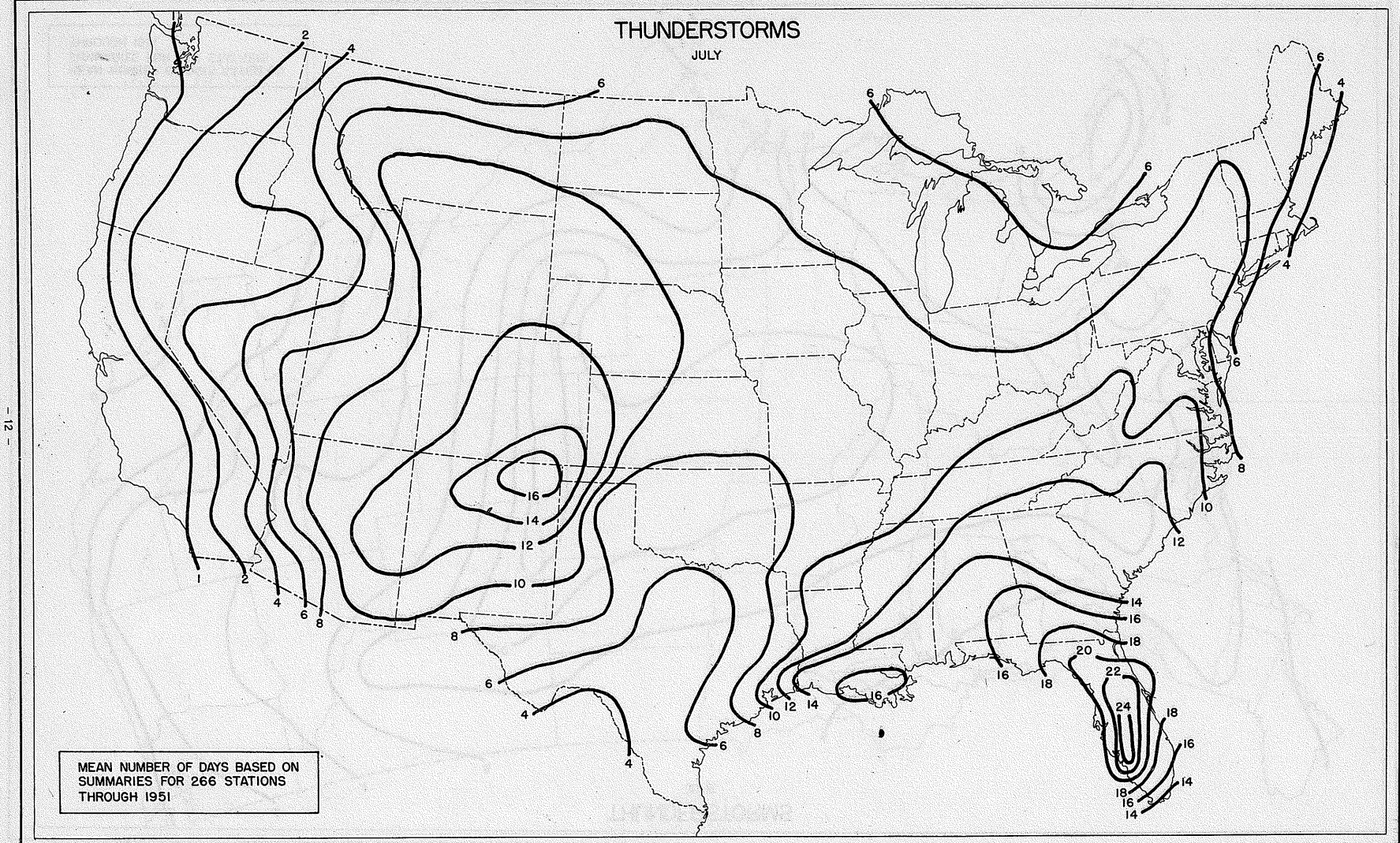
MEAN NUMBER OF DAYS BASED ON  
SUMMARIES FOR 266 STATIONS  
THROUGH 1951

FIGURE 6



# THUNDERSTORMS

JULY

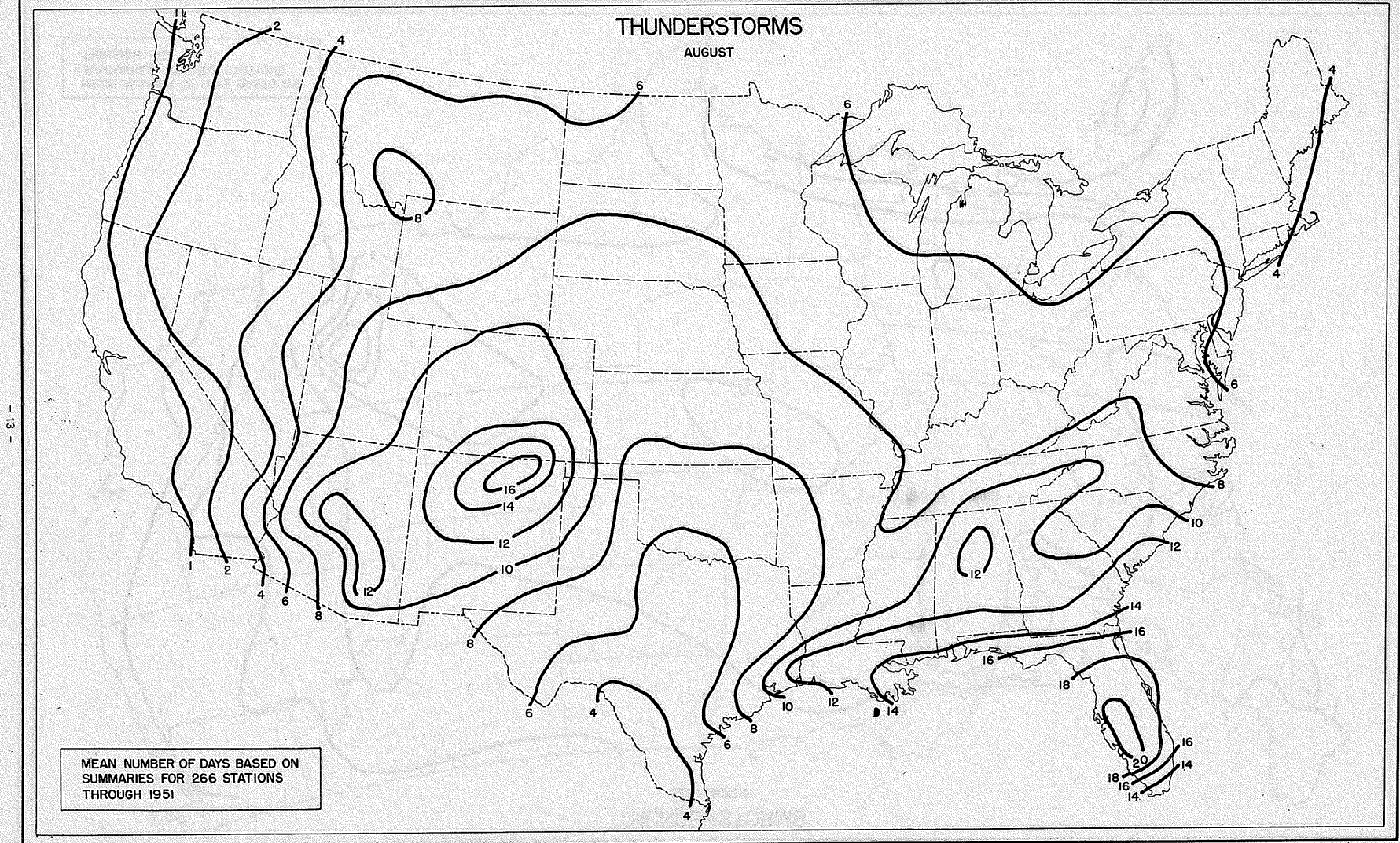


MEAN NUMBER OF DAYS BASED ON  
SUMMARIES FOR 266 STATIONS  
THROUGH 1951

FIGURE 7

# THUNDERSTORMS

AUGUST

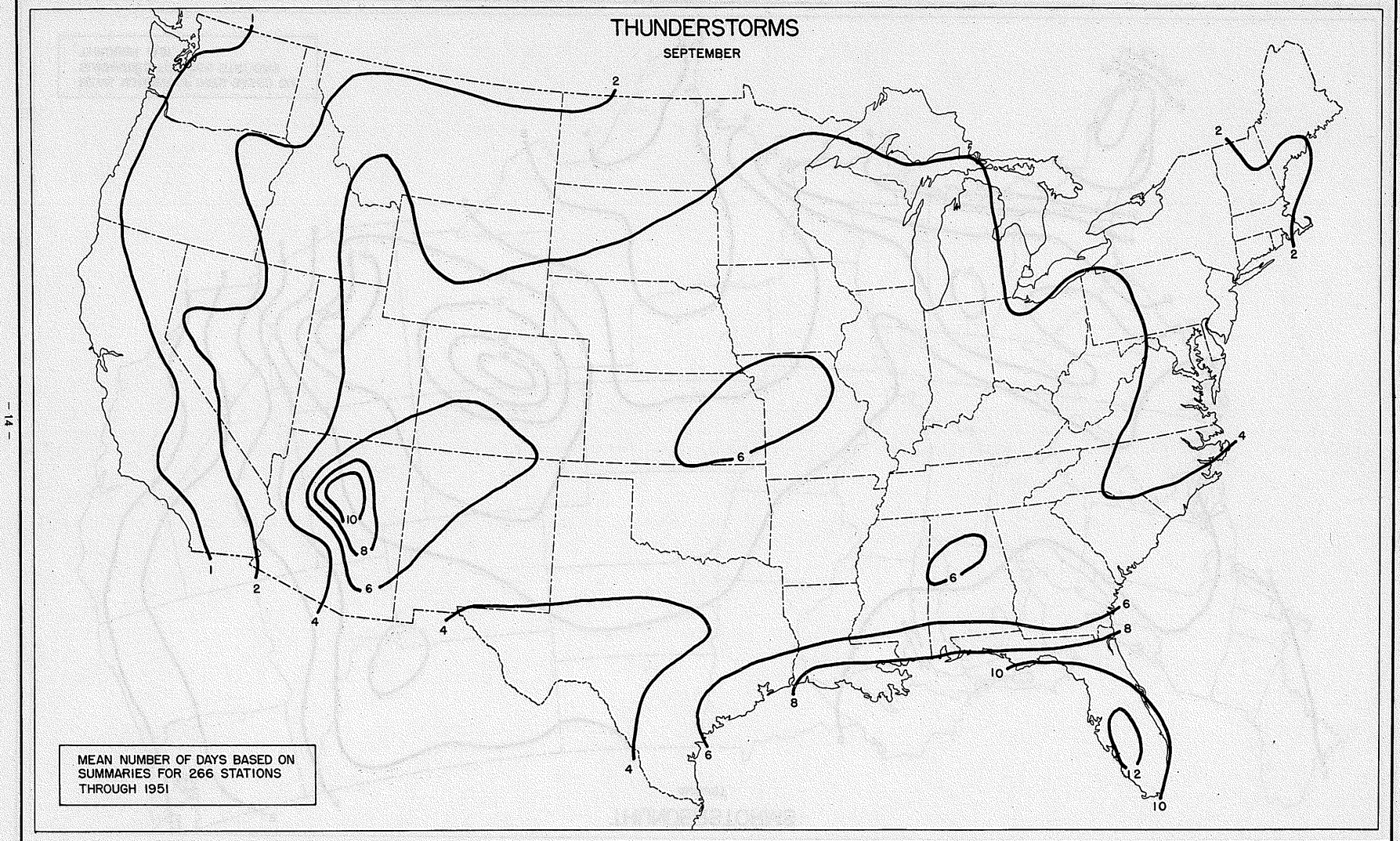


- 13 -

FIGURE 8



# THUNDERSTORMS SEPTEMBER

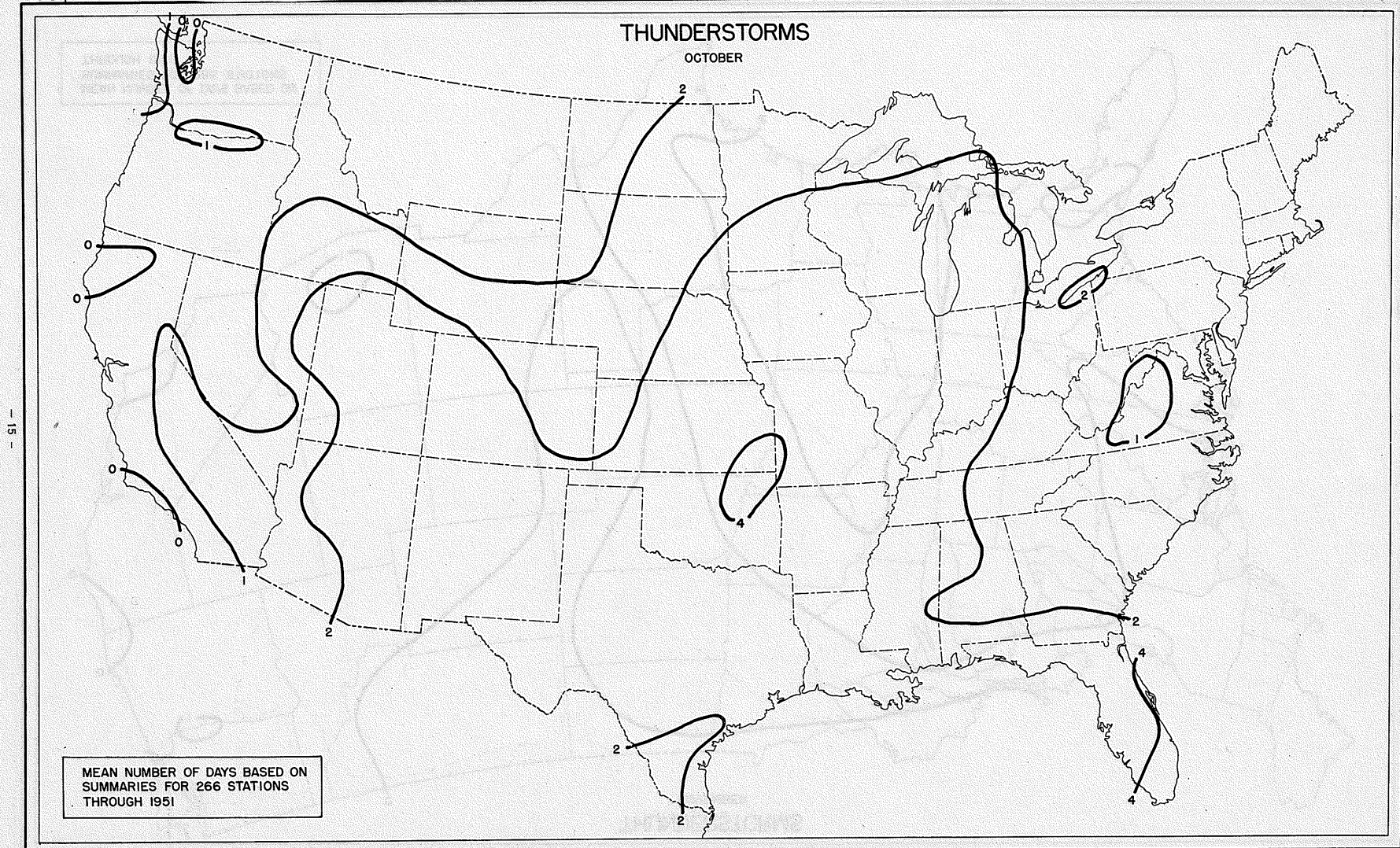


- 14 -

FIGURE 9

# THUNDERSTORMS

OCTOBER



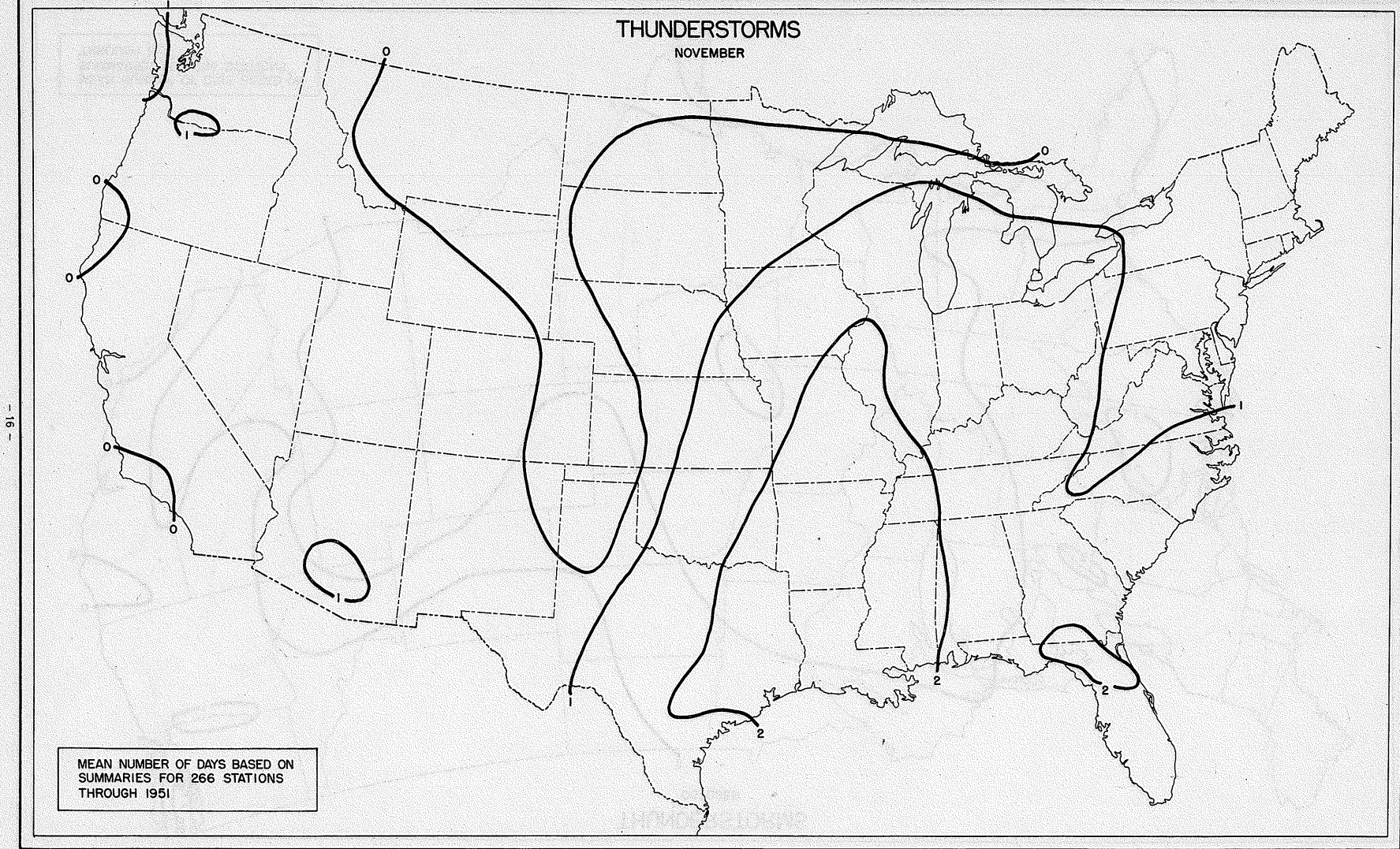
- 15 -

FIGURE 10



# THUNDERSTORMS

NOVEMBER



- 91 -

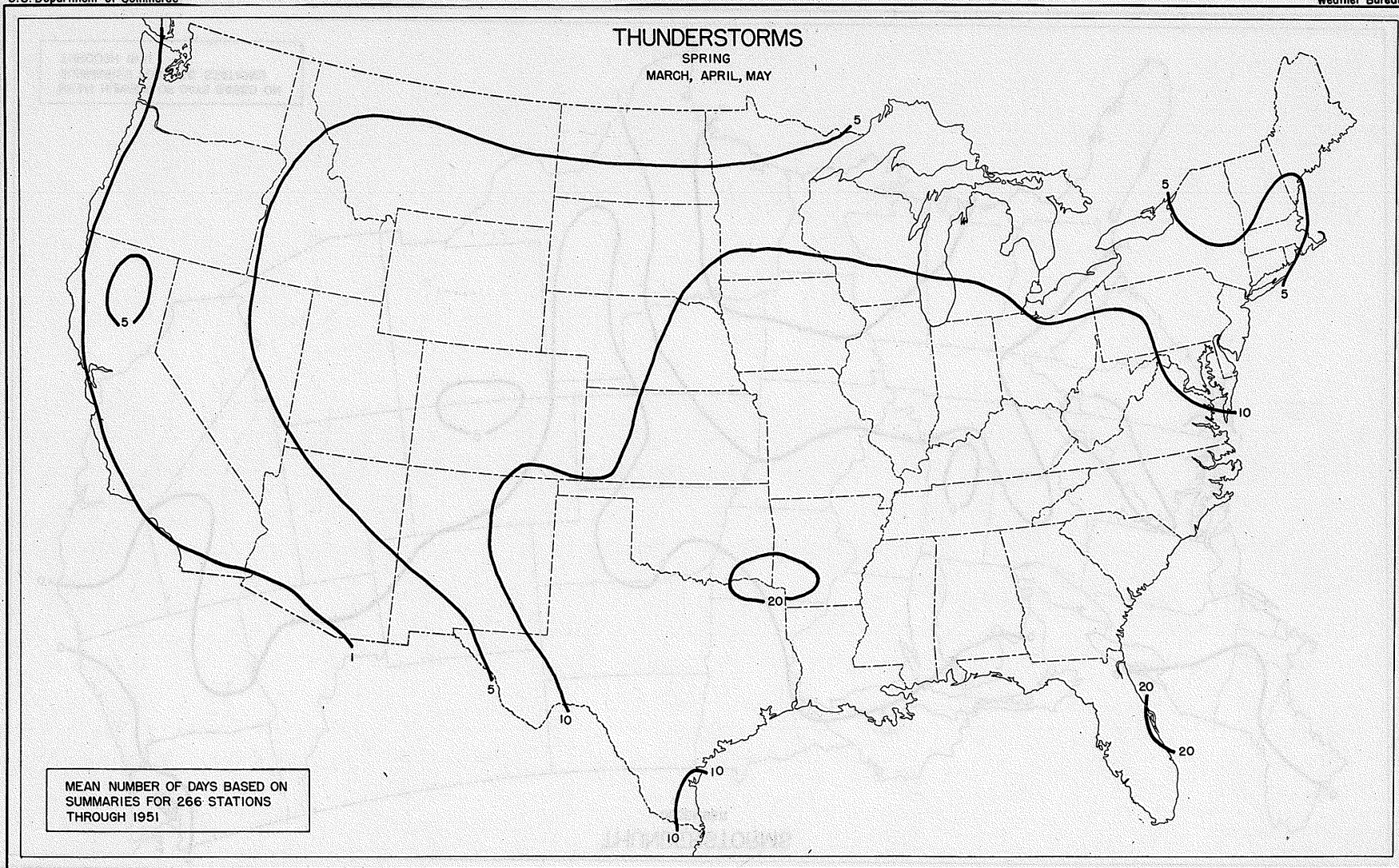
FIGURE 11





# THUNDERSTORMS

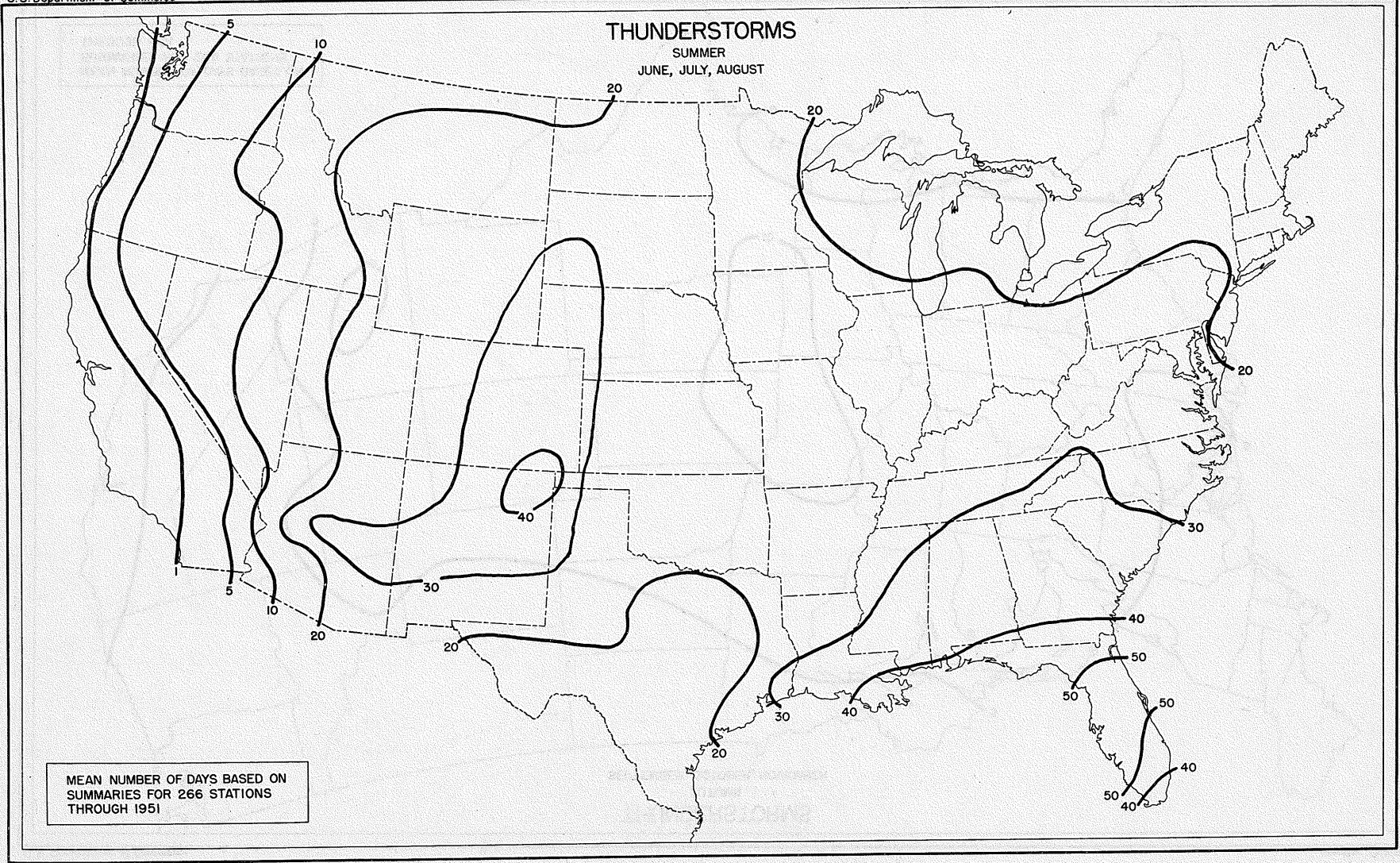
SPRING  
MARCH, APRIL, MAY



MEAN NUMBER OF DAYS BASED ON  
SUMMARIES FOR 266 STATIONS  
THROUGH 1951

FIGURE 13

### THUNDERSTORMS SUMMER JUNE, JULY, AUGUST



MEAN NUMBER OF DAYS BASED ON  
SUMMARIES FOR 266 STATIONS  
THROUGH 1951

FIGURE 14



# THUNDERSTORMS

AUTUMN  
SEPTEMBER, OCTOBER, NOVEMBER

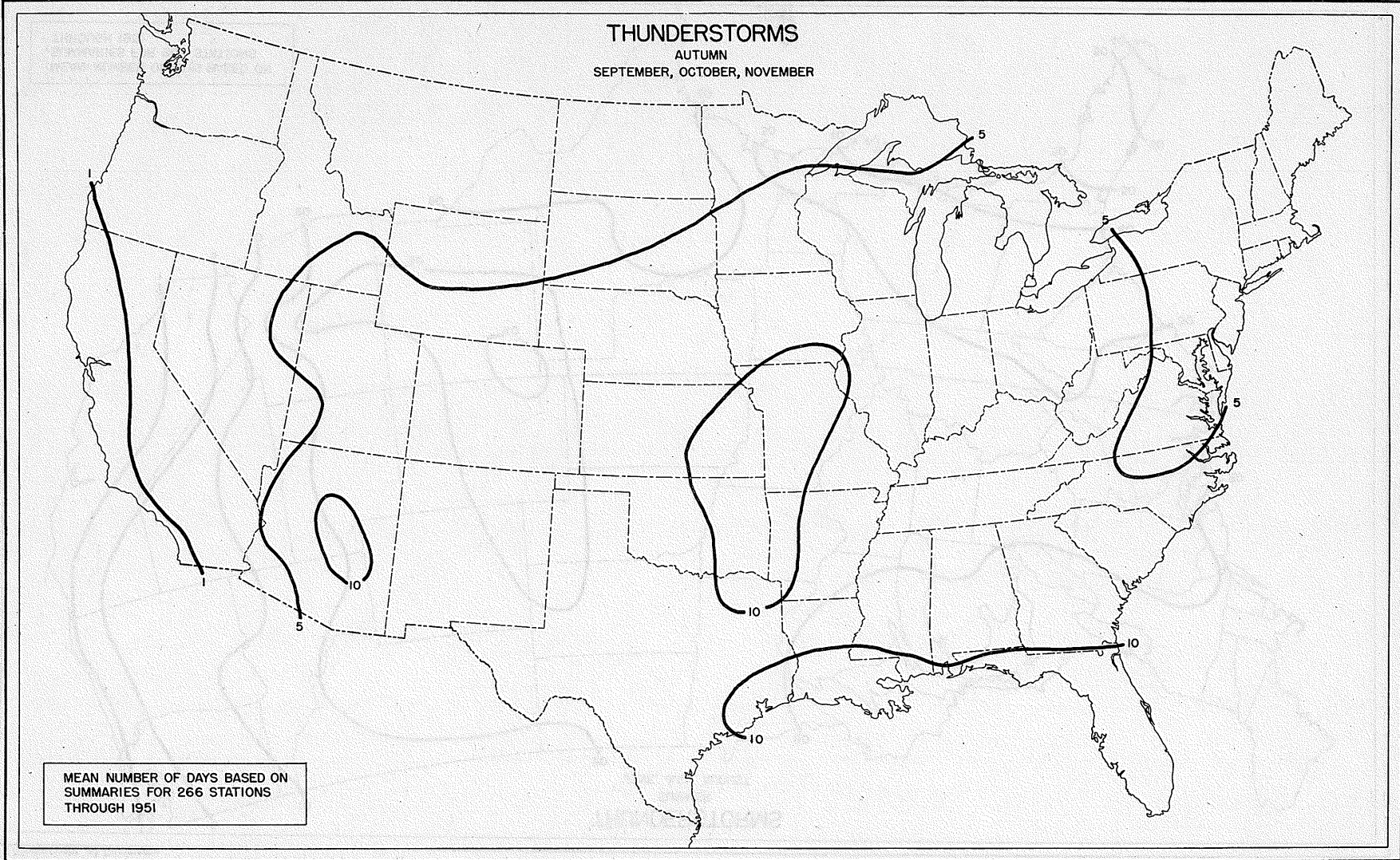
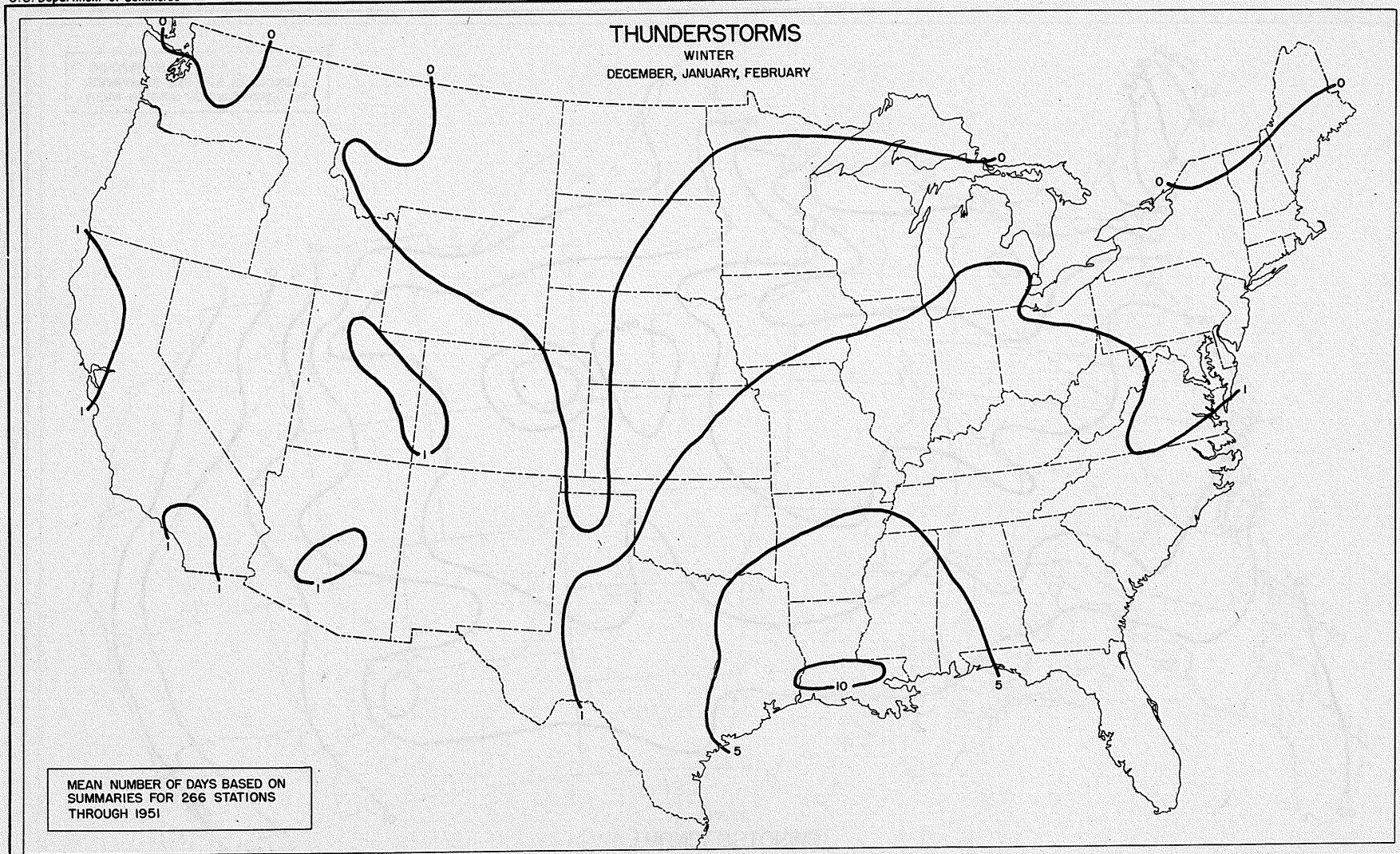


FIGURE 15

- 20 -

# THUNDERSTORMS

WINTER  
DECEMBER, JANUARY, FEBRUARY



MEAN NUMBER OF DAYS BASED ON  
SUMMARIES FOR 266 STATIONS  
THROUGH 1951

FIGURE 16



# THUNDERSTORMS

ANNUAL

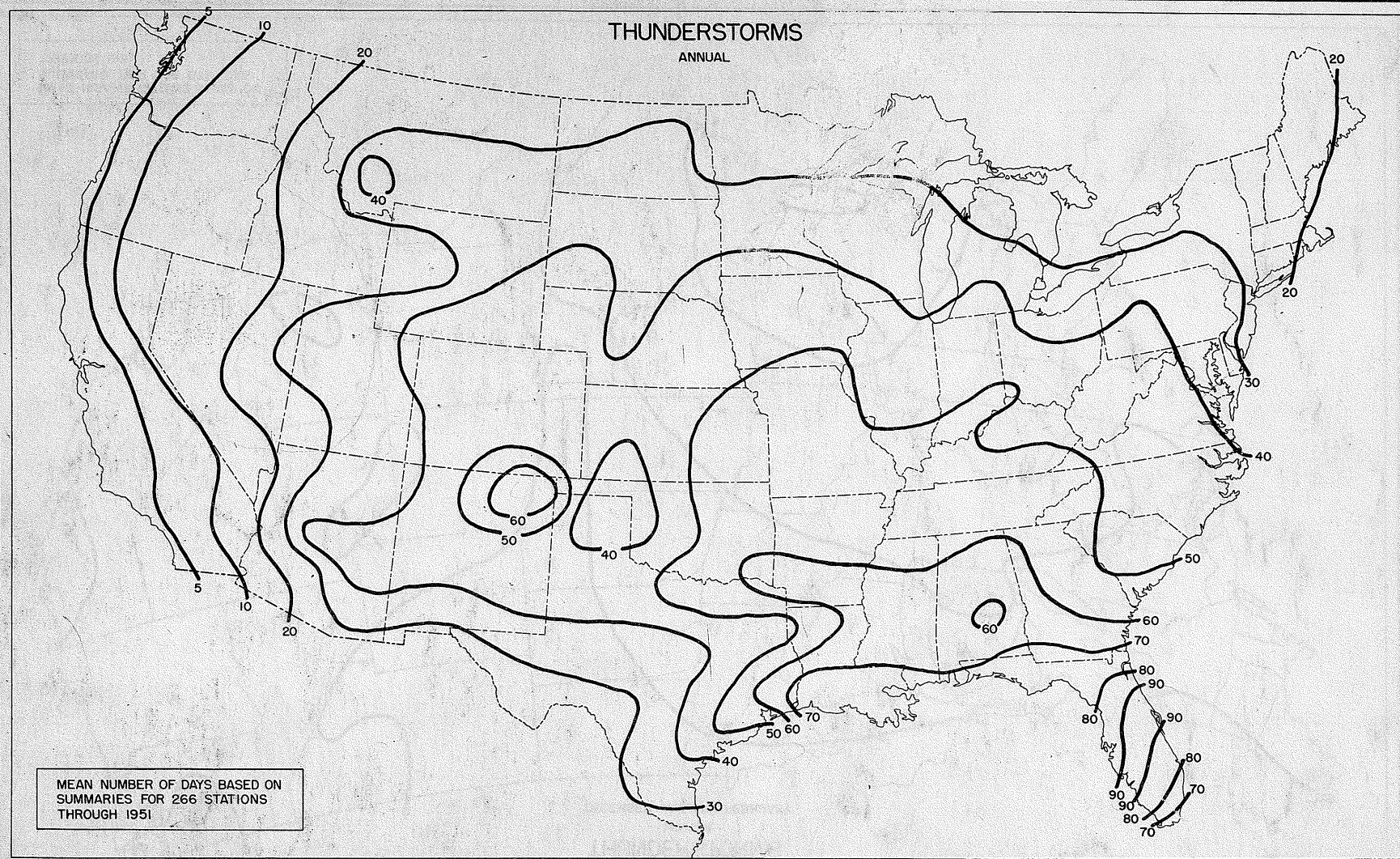


FIGURE 17